

WHAT IS CLAIMED IS:

1. A deproteinized natural rubber latex which is obtained by subjecting to a treatment for decomposition and removal of a protein, wherein coagulation of a rubber component does not occur when the concentration of calcium ions (Ca^{2+}) is 0.01 mol/L or less and coagulation of the rubber component occurs when the concentration of Ca^{2+} is 0.1 mol/L or more.

2. The deproteinized natural rubber latex according to claim 1, wherein the treatment for decomposition of a protein is conducted by adding a protease and two or more surfactants having different coagulation properties to calcium ions (Ca^{2+}) to a natural rubber latex and maturing the natural rubber latex, and

the two or more surfactants are stably dispersed when the concentration of Ca^{2+} of an aqueous solution (25°C) containing the surfactants is 0.1 mol/L or less, and are coagulated when Ca^{2+} of the aqueous solution is 1.0 mol/L or more.

3. The deproteinized natural rubber latex according to claim 1, wherein the deproteinized natural rubber latex, which is obtained by subjecting to a treatment for decomposition and removal of a protein, is prepared by adding a protease to a natural rubber latex and maturing the natural rubber latex, centrifuging the latex, thereby to isolate a creamy rubber solid content, and dispersing the rubber solid content in an aqueous medium,

wherein the aqueous medium contains two or more surfactants having different coagulation properties to calcium ions (Ca^{2+}),

and enables the surfactants to stably disperse when a liquid temperature is 25°C and the concentration of Ca^{2+} is 0.1 mol/L or less, and to coagulate when the liquid temperature is 25°C and the concentration of Ca^{2+} is 1.0 mol/L or more.

4. The deproteinized natural rubber latex according to claim 2 or 3, wherein the two or more surfactants include:

at least one surfactant H selected from the group consisting of carboxylic acid anionic surfactant, higher alcohol sulfate ester salt anionic surfactant, sulfonic acid anionic surfactant and phosphoric acid anionic surfactant, and

at least one surfactant L selected from the group consisting of higher alkyl phenyl ether sulfate ester salt anionic surfactant and higher alkyl ether sulfate ester salt anionic surfactant.

5. The deproteinized natural rubber latex according to claim 2, wherein the total amount of two or more surfactants added on treatment for decomposition of a protein is within a range from 0.01 to 10 parts by weight based on 100 parts by weight of the rubber solid content of the natural rubber latex.

6. The deproteinized natural rubber latex according to claim 3, wherein the total content of the two or more surfactants in the aqueous dispersion medium is within a range from 0.01 to 10 parts by weight based on 100 parts by weight of the rubber solid content dispersed in the aqueous dispersion medium.

7. A method of preparing a deproteinized natural rubber latex, which comprises adding a protease and two or more surfactants having

10082243-022602

different coagulation properties to calcium ions (Ca^{2+}) to a natural rubber latex, and maturing the natural rubber latex,

wherein the two or more surfactants are stably dispersed when the concentration of Ca^{2+} of an aqueous solution (25°C) containing the surfactants is 0.1 mol/L or less, and are coagulated when Ca^{2+} of the aqueous solution is 1.0 mol/L or more.

8. A method of preparing a natural rubber latex, which comprises subjecting a natural rubber latex to a treatment for decomposition of a protein due to a protease and a treatment for removal of a protein due to centrifugation, and dispersing the resulting creamy rubber solid content in an aqueous medium,

wherein the aqueous medium contains two or more surfactants having different coagulation properties to Ca^{2+} to a natural rubber latex, and enables the surfactants to stably disperse when a liquid temperature is 25°C and the concentration of Ca^{2+} is 0.1 mol/L or less, and to coagulate when the liquid temperature is 25°C and the concentration of Ca^{2+} is 1.0 mol/L or more.

9. A rubber product using a deproteinized natural rubber latex, which is obtained by dipping a dipping mold, the surface of which is coated with an anode coagulant, in the deproteinized natural rubber latex containing a vulcanizing agent added therein of any one of claims 1 to 6, vulcanizing a rubber film formed on the surface of the dipping mold, and removing the rubber film from the dipping mold.

10. A proteolytic agent for natural rubber latex, comprising

wherein the two or more surfactants are stably dispersed when the concentration of Ca^{2+} of an aqueous solution (25°C) containing the surfactants is 0.1 mol/L or less, and are coagulated when Ca^{2+} of the aqueous solution is 1.0 mol/L or more.

at least one surfactant H selected from the group consisting of carboxylic acid anionic surfactant, higher alcohol sulfate ester salt anionic surfactant, sulfonic acid anionic surfactant and phosphoric acid anionic surfactant, and

at least one surfactant L selected from the group consisting of higher alkyl phenyl ether sulfate ester salt anionic surfactant and higher alkyl ether sulfate ester salt anionic surfactant.

12. The proteolytic agent for natural rubber latex according to claim 11, wherein a ratio of the content of the surfactant H to the surfactant L is within a range from 15:85 to 70:30 by weight ratio.